

REMARKS

Claims 1 – 12, 24, 26 – 33, 44, 46 – 53, 64, 66, 68 – 70, 72 – 81, and 83 – 87 are pending. The Final Action dated April 27, 2010 in this Application has been carefully considered. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claims 1, 24, 44, 64, 66, 68, 69, 70, 79 and 83 have been amended in this Response. Claim 80 has been cancelled without prejudice in this Response. Applicant has added Claim 88 in this response, and respectfully requests consideration of this new claim. Reconsideration and allowance are respectfully requested in light of the above amendments and following remarks.

In this Amendment, Applicant has cancelled Claim 80 from further consideration in this application. Applicant is not conceding that the subject matter encompassed by Claim 80 is not patentable. Claim 80 was cancelled in this Amendment solely to facilitate expeditious prosecution of the remaining claims. Applicant respectfully reserves the right to pursue additional claims, including the subject matter encompassed by Claim 80 as presented prior to this Amendment in one or more continuing applications.

Clarifying Amendments

Applicants have made the following clarifying amendments:

- Claim 44 is amended to move the subparagraph introducing the term “housing” prior to all other subparagraphs referring to “the housing” as a claim element. This change provides a proper antecedent basis to references to “the housing”. The rearrangement of sub-paragraphs is not intended to limit the operations of Claim 44 to any specific order of operation.

- Claim 66 is amended to state that the “material extends ~~from~~ at least partially into the at least one aperture” to correct the grammar of the claim language.
- Claim 79 is amended to replace the label of the claimed element referred to as a “covering material” to a “protective material.” This change clarifies the antecedent basis of the claimed element.
- Claims 64, 66, 68, 69 and 70 are amended so that the terms “a size and shape” (changes emphasized) of the claimed apertures include proper articles to introduce the claim element and clarify the antecedent basis of subsequent references to the size and shape of the apertures.
- Claim 69 was amended to include the term “the at least one aperture without the protective material” to correct the grammar of the claim language. Claim 69 was also amended to replace the term “one or more apertures” and “aperture” with “*at least one* aperture” to provide an adequate antecedent basis for the claimed apertures. (Changes Emphasized.)
- Claim 83 was amended to further limit and to directly depend upon Claim 81 to provide an antecedent basis for the term “additional material”, which was previously presented in canceled Claim 82.

Applicant respectfully submits that these amendments bear no more than a tangential relationship to the rejection of these claims. Accordingly, Applicant does not intend to surrender any equivalents encompassed by these claims as a result of these amendments, because these amendments do not address any rejection or objection of the claims.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 1 – 12, 24, 26 – 33, 44, 46 – 53, 64, 66, 68 – 70, 72 – 81, and 83 – 87 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner indicated that there was no support in the original disclosure for the negative limitation of excluding metallic housing. Applicant has withdrawn the proposed amendment, which limited the housing to “non-metallic” housings from the independent Claims 1, 24, 44, 64, 66, 68, 69, and 70, and by implication from their respective dependent claims. Applicant does not agree, concede, or admit to the Examiner’s contentions that the original disclosure did not support a negative limitation of excluding metallic housings. Applicant expressly reserves the right to re-introduce the limitation at a later time or in a continuation of this Application. Accordingly, Applicant has traversed the rejection of Claims 1 – 12, 24, 26 – 33, 44, 46 – 53, 64, 66, 68 – 70, 72 – 81, and 83 – 87 under 35 U.S.C. § 112, first paragraph, and respectfully requests that the rejection be withdrawn.

The Examiner further indicated that there is no support for sulfur hexafluoride, which is claimed in Claim 84. Final Action, Page 2. Applicant has amended the Specification, as noted above, to include reference to “sulfur hexafluoride,” among other inert gases, because Applicant believes that such an amendment is supported by the Application, as originally filed. Applicant contends that support for this limitation is found at least in the paragraph beginning on page 6, line 5 of the Application as originally filed, which states “typically *an inert gas atmosphere* . . . is utilized.” Sulfur hexafluoride, among other inert gases, would have been widely known by persons, including persons of ordinary skill in the art, as an inert gas and suitable for electrical insulation of an electrical device. *See, e.g.*, Exhibit 1, attaching U.S. Patent No. 5,136,419 to Shabrang, col. 3. lines 53 – 55, 68, and col. 4, line 1 (“An inert gas in the present invention [an

electric device positioned in space consisting of an inert gas] is a gas or mixture of gases that do not chemically react with the [electronic device] ... *Sulfur hexafluoride* should be an excellent inert gas in the present invention.”) (emphasis added). The Examiner has already implicitly that the other inert gases listed in Claim 84 and in the amendment to the Paragraph beginning on page 6, line 5 of the Application as originally filed are adequately supported. But Applicant will submit further remarks in support of these gases, should the Examiner require further comment. Accordingly, not only is the amendment to the Specification adequately supported, but also Applicant has traversed the rejection of Claim 84 under 35 U.S.C. § 112, first paragraph. Applicant respectfully requests that the amendment be entered and the rejection be withdrawn.

Rejections over Gueissaz in view of Carley

Claims 1, 3 – 5, 8, 24, 26, 27, 30, 32, 33, 44, 46, 47, 48, 50, 52, 53, 66, 68 – 70, 73, and 75 – 80 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. US 2001/0004085 to Gueissaz (“Gueissaz”) in view of U.S. Patent No. 7,008,812 to Carley (“Carley”). In light of the amendments submitted herewith, Applicant respectfully submits that the rejections have been overcome. Accordingly, Applicant respectfully requests that the rejections be withdrawn.

Rejected independent Claim 1 as now amended more particularly recites one of the distinguishing characteristics of the present invention, namely, “*selecting the protective material to coordinate a viscosity of the protective material with the size and shape of the one or more apertures*, wherein protective material is selected to have a viscosity for preventing the protective material from being deposited on the device or any substrate underlying the housing.” (Emphasis added.) Support for this Amendment can be found, among other places, in Paragraphs [0025],

[0026], and [0027] of the Application as published in U.S. Pub. No. 2004/0166606, or at page 6, lines 5 – 18 and page 9, line 10 through page 10, line 11 of the Application as originally filed.

Regarding Claim 1, Guieissaz was cited as assertedly fully disclosing “depositing a protective material (23) adjacent the housing of structural material overlaying at least one aperture of the housing in amount sufficient to substantially close the aperture/partially in without entering the housing sufficiently to interfere with operation of the device.” Final Action, page 4.

However, Guieissaz does not suggest, teach, or disclose *selecting* the liquid solder 23 *to coordinate the viscosity of liquid solder 23 with the size of the passages 10*. Specifically, Guieissaz teaches that the passages 10 “are of *sufficiently small size* to ... allow them to be sealed by a liquid solder wave 23... [which] will seal said passages 10 without risking coming into contact with microsystem 6.” Paragraph [0107] of Guieissaz (emphasis added). In Guieissaz, the size of the holes *must be reduced to a “sufficiently small size”* to match the viscosity of liquid solder. There would have been no reason or motivation for a person of ordinary skill to have selected the solder due to its viscosity. Instead, Guieissaz discloses that *the size of the passages 10 must be matched to the accommodate for the flow properties* of the liquid solder 23 to prevent the solder wave 23 from coming into contact with the microsystem 6.

In view of the foregoing, it is apparent that the cited references do not teach the unique combination now recited in amended Claim 1. Applicant therefore submits that amended Claim 1 is clearly and precisely distinguishable over the cited references in a patentable sense, and is therefore allowable over these references and the remaining references of record. Accordingly, Applicant respectfully requests that the rejection of amended Claim 1 under 35 U.S.C. § 103(a) over Gueissaz in view of Carley be withdrawn and that Claim 1 be allowed.

Applicant contends that the rejections of amended Claims 24, 44, 66, 68, 69, and 70 are overcome for at least some of the reasons that the rejection of Claim 1 as amended is overcome. These reasons include Gueissaz not disclosing, teaching, or suggesting “*selecting a protective material to coordinate a viscosity of the protective material with the size and shape of the at least one aperture*,” wherein protective material is selected to have a viscosity for preventing the protective material from being deposited on the device or any substrate underlying the housing.” (Emphasis added.)

Guissaz does not suggest, teach, or disclose *selecting* the liquid solder 23 *to coordinate the viscosity of liquid solder 23 with the size of the passages 10*. Instead, Guissaz discloses that *the size of the passages 10 must be matched to the accommodate for the flow properties* of the liquid solder 23 to prevent the solder wave 23 from coming into contact with the microsystem 6. Accordingly, there would have been no reason or motivation for a person of ordinary skill to have selected the solder due to its viscosity.

In view of the foregoing, it is apparent that the cited references do not teach the unique combination now recited in amended Claims 24, 44, 66, 68, 69, and 70. Applicant therefore submits that amended Claims 24, 44, 66, 68, 69, and 70 are clearly and precisely distinguishable over the cited references in a patentable sense, and are therefore allowable over these references and the remaining references of record. Accordingly, Applicant respectfully requests that the rejection of amended Claims 24, 44, 66, 68, 69, and 70 under 35 U.S.C. § 103(a) over Gueissaz in view of Carley be withdrawn and that Claims 24, 44, 66, 68, 69, and 70 be allowed.

Claims 3 – 5, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz in view of Carley. However, Claims 3 – 5 and 8 depend from and further limit Claim 1. Hence, for at least the aforementioned reasons that Claim 1 should be deemed to be in condition for

allowance, Claims 3 – 5, and 8 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 3 – 5 and 8 also be withdrawn.

Claims 26, 27, 30, 32, and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz in view of Carley. However, Claims 26, 27, 30, 32, and 33 depend from and further limit Claim 24. Hence, for at least the aforementioned reasons that Claim 24 should be deemed to be in condition for allowance, Claims 26, 27, 30, 32, and 33 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 26, 27, 30, 32, and 33 also be withdrawn.

Claims 46, 47, 48, 50, 52, and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz in view of Carley. However, Claims 46, 47, 48, 50, 52, and 53 depend from and further limit Claim 44. Hence, for at least the aforementioned reasons that Claim 44 should be deemed to be in condition for allowance, Claims 46, 47, 48, 50, 52, and 53 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 46, 47, 48, 50, 52, and 53 also be withdrawn.

Rejections over Gueissaz and Carley in view of Marrs and Plummer

Claims 2, 7, 10 – 12, 64, 74, and 84 - 86 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gueissaz in view of Carley, and further in view of U.S. Patent No. 5,485,037 to Marrs (“Marrs”) and U.S. Patent No. 4,480,975 to Plummer et al (“Plummer”). In light of the amendments submitted herewith, Applicant respectfully submits that the rejections have been overcome. Accordingly, Applicant respectfully requests that the rejections be withdrawn.

Applicant contends that the rejection of amended Claim 64 is overcome for at least some of the reasons that the rejection of Claim 1 as amended is overcome. These reasons include Gueissaz not disclosing, teaching, or suggesting “*selecting a protective material to coordinate a viscosity of*

the protective material with the size and shape of the at least one aperture, wherein protective material is selected to have a viscosity for preventing the protective material from being deposited on the device or any substrate underlying the housing.” (Emphasis added.)

Guissaz does not suggest, teach, or disclose *selecting* the liquid solder 23 *to coordinate the viscosity of liquid solder 23 with the size of the passages 10*. Instead, Guissaz discloses that *the size of the passages 10 must be matched to the accommodate for the flow properties* of the liquid solder 23 to prevent the solder wave 23 from coming into contact with the microsystem 6. Accordingly, there would have been no reason or motivation for a person of ordinary skill to have selected the solder due to its viscosity.

In view of the foregoing, it is apparent that the cited references do not teach the unique combination now recited in amended Claim 64. Applicant therefore submits that amended Claim 64 is clearly and precisely distinguishable over the cited references in a patentable sense, and is therefore allowable over these references and the remaining references of record. Accordingly, Applicant respectfully requests that the rejection of amended Claim 64 under 35 U.S.C. § 103(a) over Guissaz in view of Carley, Marrs and Plummer be withdrawn and that Claim 64 be allowed.

Claims 2, 7, 10 – 12, and 84 – 86 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz and Carley in view of Marrs and Plummer. However, Claims 2, 7, 10 – 12, and 84 – 86 depend from and further limit Claim 1. Hence, for at least the aforementioned reasons that Claim 1 should be deemed to be in condition for allowance, Claims 2, 7, 10 – 12, and 84 – 86 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 2, 7, 10 – 12, and 84 – 86 also be withdrawn.

Claim 74 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Guissaz and Carley in view of Marrs and Plummer. However, Claim 74 depends from and further limits Claim

70. Hence, for at least the aforementioned reasons that Claim 70 should be deemed to be in condition for allowance, Claim 74 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejection of dependent Claim 74 also be withdrawn.

Rejections over Gueissaz and Carley in view of Yang

Claims 28, 29, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz and Carley in view of U.S. Patent Application Publication No. US 2004/0046835 to Yang et al (“Yang”). However, Claims 28, 29 and 31 depend from and further limit Claim 24. Hence, for at least the aforementioned reasons that Claim 24 should be deemed to be in condition for allowance, Claims 28, 29, and 31 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 28, 29, and 31 also be withdrawn.

Claims 49 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz and Carley in view of Yang. However, Claims 49 and 51 depend from and further limit Claim 44. Hence, for at least the aforementioned reasons that Claim 44 should be deemed to be in condition for allowance, Claims 49 and 51 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 49 and 51 also be withdrawn.

Claim 72 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gueissaz and Carley in view of Yang. However, Claim 72 depends from and further limits Claim 70. Hence, for at least the aforementioned reasons that Claim 70 should be deemed to be in condition for allowance, Claims 72 should be deemed to be in condition for allowance. Applicant respectfully requests that the rejection of dependent Claim 72 also be withdrawn.

New Claim

Applicant has added new Claim 88. Support for this claim can be found, among other places, in Paragraphs [0021], [0025], [0026], and [0027] of the Application as published in U.S. Pub. No. 2004/0166606, or at page 6, lines 5 – 18 and page 9, line 10 through page 10, line 11 of the Application as originally filed. Claim 88 should be allowable for at least the same reasons that Claim 1 should be deemed to be in condition for allowance. These reasons include Gueissaz not disclosing, teaching, or suggesting “*selecting the protective material to coordinate a viscosity of the protective material with the size and shape of the one or more apertures*, wherein the protective material is selected to have a viscosity for preventing the protective material from being deposited on the device or any substrate underlying the housing.” (Emphasis added.) Applicant respectfully requests that Claim 88 be allowed.

Applicant has now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1 – 12, 24, 26 – 33, 44, 46 – 53, 64, 66, 68 – 70, 72 – 81, and 83 – 88.

Applicant hereby requests continued examination together with an extension of time for making this reply and hereby authorizes the Director to charge the required fees to Deposit Account No. 50-0605 of CARR LLP. Regarding new Claim 88, Applicant hereby authorizes the Director to charge the fee required under 37 C.F.R. §1.16(h) for one independent Claim in excess of three to Deposit Account No. 50-0605 of CARR LLP. Applicant does not believe that any other fees are due; however, in the event that any other fees are due, the Director is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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